

IN THE CLAIMS:

Please cancel claims 1-19 with out prejudice or disclaimer. Please add new claims 20-38 as follows.

Claims 1-19 (Canceled)

20. (New) A network switch for network communications, said network switch comprising:

a first data port interface, said first data port interface supporting a plurality of data ports for transmitting and receiving data at a first data rate;

a second data port interface for transmitting and receiving data at a second data rate;

a first internal memory, said first internal memory communicating with said first data port interface and said second data port interface;

a first memory management unit, said first memory management unit including an external memory interface for communicating data from said first data port interface to and from an external memory;

a second internal memory, said second internal memory communicating with said second data port interface;

a second memory management unit, said second memory management unit controlling access to and from said second internal memory; and

a communication channel, said communication channel for communicating data and messaging information between said first data port interface, said second data port interface, said first internal memory, and said first memory management unit,

wherein said first memory management unit directs data from one of said first data port and said second data port to one of said internal memory and said external memory interface according to a predetermined algorithm.

21. (New) A network switch as recited in claim 20, wherein said second memory management unit is configured to monitor the communication channel and receive data packets from the communication channel which are destined for the second data port interface from the first data port interface.

22. (New) A network switch as recited in claim 20, wherein the network switch includes an appending unit for appending a module identification header to data packets which are being sent to a destination port from the second data port interface.

23. (New) A network switch as recited in claim 22, wherein the module header appended to the data packet by the appending unit includes a module ID bitmap which identifies other network switches to which the data packet should be sent via the second data port interface.

24. (New) A network switch as recited in claim 22, wherein the module header appended to the data packet by the appending unit includes mirroring information which identifies a port on a remote network switch to which the packet should be sent.

25. (New) A network switch as recited in claim 22, wherein the module header includes data identifying a class-of-service priority for the data packet

26. (New) A network switch as recited in claim 22, wherein the module header includes data which identifies the network switch as a source network switch for the packet.

27. (New) A network switch as recited in claim 20, wherein said second data port interface includes a plurality of tables thereupon.

28. (New) A network switch as recited in claim 27, wherein the plurality of tables include at least one of a programmable virtual LAN (VLAN) table, a multicast table, an IP multicast table, a trunk group bitmap table, a priority-to-class-of-service queue mapping table, and a port-to-class-of-service mapping table.

29. (New) A network switch as recited in claim 20, wherein said first data port interface is configured to support a plurality of data ports transmitting and receiving data in accordance with an Ethernet standard, and

wherein said second data port interface is a high-performance interface for communicating with other network switches in a stacked configuration.

30. (New) A network switch as recited in claim 29, wherein said second data port interface contains a single input/output port thereupon.

31. (New) A network switch as recited in claim 20, wherein said first data port interface interfaces include a packet slicing unit for slicing variable length packets into a plurality of equal length cells.

32. (New) A network switch as recited in claim 20, wherein said communication channel comprises three communication channels.

33. (New) A network switch as recited in claim 32, wherein said three communication channels include a first channel for communicating cell data between the plurality of data ports in the first data port interface, the second data port interface, the first and second internal memories, and the first and second memory management units, said three communication channels also including a second channel, synchronously locked with the first channel, for communicating message information corresponding to the cell data on the first channel, said communication channels also including a second channel, independent from said first and second channel, for communicating sideband message information.

34. (New) A network switch as recited in claim 20, wherein said first data port interface, second data port interface, first internal memory, first memory management unit, second internal memory, second memory management unit, and said communication channel are integrated on a single application specific integrated circuit (ASIC) chip.

35. (New) A network switch as recited in claim 20, wherein the second internal memory and the second memory management unit are part of the second data port interface.

36. (New) A network switch as recited in claim 20, wherein said second memory management unit includes a scheduler, in communication with the second internal memory, for controlling forwarding of packets out of the network switch from the second internal memory.

37. (New) A network switch as recited in claim 36, further comprising an arbiter, in communication with the scheduler, for controlling access to a communication line to which the data port is connected.

38. (New) A network switch as recited in claim 20, further comprising a stripping unit for stripping a module header from packets which are being switched out of the network switch.